

BIBLIOGRAPHICAL NOTICES.

Reports of Explorations and Surveys to ascertain the most practicable and Economical Route for a Railroad from the Mississippi River to the Pacific Ocean, made under the Direction of the Secretary of War in 1853-6. Vol. x. Washington, 1859. 4to.

WE have already on two occasions noticed the work of which the present volume forms a part, as containing large and valuable contributions towards our knowledge of the Fauna and Flora of North America, and we have explained the circumstances which led to its production. The 10th volume, which has now been received, contains the 3rd and 4th Parts of the General Report upon the Zoology, and the separate Reports of several of the different Expeditions upon the same subject. Of the General Report upon the Reptiles of North America we are forced to content ourselves with the plates only, the War Department having "considered it advisable to omit the publication" of this portion of the work on account of "the General Natural History Reports having been extended so much beyond the limits originally contemplated." We do not thank the War Office for this. After bearing the burden of the nine thick quarto volumes already issued, it was hardly worth while to kick at the few sheets of letter-press necessary for the General Report on Reptiles, for which the plates had been already prepared. We fear, after all, that the Government at Washington have not quite liberated themselves from the penny-wise and pound-foolish system which prevails in relation to scientific undertakings on this side of the Atlantic. However, the plates, of themselves, will be of great assistance to those who are attempting to follow Messrs. Baird and Girard into the numerous new genera and species which they have created amongst the American animals of this class, and may, we hope, convince European naturalists of the validity of these new subdivisions, concerning which at present they seem to be rather incredulous*.

The General Report on the Fishes collected by the Expeditions, of which the War Department have favoured us with the letter-press as well as the plates, next follows. It is from the pen of Dr. Charles Girard, and, in our opinion, contrasts rather unfavourably with those upon the Mammals and Birds, already issued. The subdivision of genera is here carried to an almost incredible extent; the numerous supposed new species are but shortly and imperfectly characterized; and the whole execution, particularly from the misprints being glaring and numerous, bears evident marks of haste. For all that, such a general *résumé* of the present state of our knowledge of this class of animals, as found in the North American continent, cannot be otherwise than an important work, and one that the ichthyologists of Europe will do well to make themselves well acquainted with.

* See 'Catalogue of Colubrine Snakes in the Collection of the British Museum,' by Dr. A. Günther (London, 1858), and the same author's remarks in Proc. Zool. Soc. 1858, p. 385.

The remainder of the volume is occupied by the special Zoological Reports of some of the separate Expeditions sent out to survey the Pacific Railroad routes,—namely, of those under the commands of Lieutenants Beckwith, Whipple, Parke, Williamson, and Abbott. It would have been better, we think, to have merged all these Reports into the General Report, and to have issued the whole in one connected series. It is tiresome to be referred from the Special Report to the General for the description of a species or the characters of a genus, and from the General to the Special for remarks on the habits of animals, their mode of propagation, &c. But it is easy to criticize; and all the points to which we have alluded detract but little from the great general value of this work. We fear it will be long before our own Government issues a series of “Blue-books” so generally acceptable to the scientific world, or so likely to escape the usual fate of the British article—being sold for waste paper.

Animal Physiology. By WILLIAM B. CARPENTER, M.D., F.R.S., F.G.S., F.L.S. New edition, thoroughly revised and partly re-written. Sm. 8vo. London, H. G. Bohn, 1859.

OF the series of scientific manuals prepared many years ago by Dr. Carpenter, and published by W. S. Orr and Co. of Amen Corner, the treatise on Animal Physiology was certainly one of the best. It has already passed through two or three editions; and we have now to announce the publication of a new edition thoroughly revised by the author.

The book has undergone considerable alterations in many parts, in order to bring it up to the present state of science; and three chapters especially have been almost entirely re-written. These are: the first chapter, treating “of the vital operations of animals, and the instruments by which they are performed,” which contains an excellent digest of the distinctive characters of animals, with an account of the nature of their various tissues and the chemical constituents of the latter; the second chapter, giving a general view of the classification of the animal kingdom, which is greatly improved; and the last chapter, which treats of the phænomena of reproduction. The changes in the latter are very extensive, as may be supposed from the great progress made within the last few years in our knowledge of these matters; and the reader will find in it a very good, although succinct account, not only of the ordinary development of the ovum, but also of the alternation of generations, and of the singular phænomena to which Siebold restricts the term Parthenogenesis. On the whole, we may safely recommend the present edition of Dr. Carpenter’s little book as the best popular account of the structure and functions of the animal body for the use of the general reader.